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Application No.: 10/584,786
Amendment dated January 14, 2010
Response to Office Action dated September 14, 2009

Attorney Docket No. Serie 6486

Amendments to the Claims

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

Claims 1 – 9 (cancelled).

Claim 10 (currently amended): A hydrogen storage installation comprising:

- a) a liquid hydrogen tank (1) having an insulating jacket (2) made of cellular material incorporating at least one first metal screen (3),
- b) a pipeline (7) for extracting liquid hydrogen,
- c) a circuit (8) for discharging gaseous hydrogen, connected to the hydrogen inlet of a fuel cell (11) and having at least one portion (14) in a heat exchange relationship with the first screen,
- d) an electrical refrigerating machine (15) connected to the fuel cell (11) and having at least one cold part (16) in a heat exchange relationship at least with the first screen (3).

Claim 11 (currently amended): The installation of claim 10, wherein the tank has at least one second thermal screen (4) also in a heat exchange relationship with a portion (13) of the discharge circuit (8).

Claim 12 (currently amended): The installation of claim 11, wherein the second thermal screen (4) is positioned inside the first thermal screen (3).

Claim 13 (currently amended): The installation of claim 12, wherein the second thermal screen (4) is an envelope with inherent stability.

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Claim 14 (currently amended): The installation of claim 10, wherein the insulating jacket ~~(2)~~ comprises at least two layers of polyurethane foam.

Claim 15 (currently amended): The installation of claim 11, wherein at least one of the first and second thermal screens ~~(3; 4)~~ is composed of an assembly of at least two metal plates ~~(31; 32)~~.

Claim 16 (currently amended): The installation of claim 15, wherein at least one part ~~(14A; 14B)~~ of the portion ~~(14; 13)~~ of the circuit ~~(8)~~ in a heat exchange relationship with the screen ~~(3; 4)~~ is formed of zones deformed into a trough ~~(34; 35)~~ of said plates ~~(31; 32)~~.

Claim 17 (currently amended): A vehicle comprising a hydrogen storage installation of claim 10.

Claim 18 (currently amended): The vehicle of claim 17, wherein the fuel cell participates in the propulsion of the vehicle.

Claim 19 (new): The installation of claim 10, wherein the circuit has an inner end emerging in an upper part of the tank and an outer end, the outer end being the portion of the circuit that is connected to the hydrogen inlet of the fuel cell.

Claim 20 (new): The installation of claim 19, wherein:

said at least one first metal screen comprises an inner screen and an outer screen; and

said at least one portion comprises an inner portion running along in heat exchange with the inner screen and a downstream portion running along in a heat exchange with the outer screen.

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Claim 21 (new): A system for storage of liquid Hydrogen, comprising the installation of claim 10 containing liquid Hydrogen in the tank.

Claim 22 (new): The installation of claim 11, wherein the first and second screens is buried in the cellular material.

Claim 23 (new): The installation of claim 10, wherein no vacuum insulation is present.